WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Tuesday, November 21, 2006

Hide?	Set Name	Query	Hit Count
		DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR	
☐	L1	murdin.in.	137
☐	L2	L1 and chlamyd$	110
☐	L3	L2 and (pomp$ or omp$ or momp$)	65
☐	L4	L3 and (plasmid or vector or promoter).clm.	44
☐	L5	l4 and (cmv$ or cytomegalo$ or cyto-megalo$).ti,ab,clm.	14

END OF SEARCH HISTORY

Generate Collection | Print

Search Results - Record(s) 1 through 14 of 14 returned.

☐ 1. 20050069942. 01 Nov 04. 31 Mar 05. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 435/6; 435/252.3 435/320.1 435/69.3 530/350 536/23.7 C12Q001/68 C07H021/04 C07K014/295 C12N015/74.

☐ 2. 20050065106. 10 Sep 04. 24 Mar 05. Immunogenic compositions for protection against Chlamydial infection. Murdin, Andrew D., et al. 514/44; A61K048/00.

☐ 3. 20050002944. 29 Dec 03. 06 Jan 05. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/184.1; A61K039/00 A61K039/38.

☐ 4. 20040228874. 14 Jan 04. 18 Nov 04. Nucleic acid molecules encoding inclusion membrane protein C of Chlamydia. Murdin, Andrew D., et al. 424/190.1; 435/252.3 435/320.1 435/6 435/69.3 530/350 536/23.7 C12Q001/68 C07H021/04 A61K039/02.

☐ 5. 20040131630. 04 Nov 03. 08 Jul 04. Two-step immunization procedure against chlamydia infection. Brunham, Robert C., et al. 424/184.1; C12Q001/68 A61K039/00 A61K039/38.

☐ 6. 20040126382. 04 Nov 03. 01 Jul 04. Two-step immunization procedure against chlamydia infection. Brunham, Robert C., et al. 424/184.1; C12Q001/68 A61K039/00 A61K039/38.

☐ 7. 20020168382. 03 Dec 99. 14 Nov 02. TWO-STEP IMMUNIZATION PROCEDURE AGAINST CHLAMYDIA INFECTION. Brunham, Robert C., et al. 424/200.1; A61K039/02.

☐ 8. 7081245. 07 Jan 03; 25 Jul 06. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 424/263.1; 424/200.1 435/320.1 435/69.1 536/23.1 536/23.7. A61K39/118 20060101 C07H21/04 20060101 .

☐ 9. 7070792. 30 Jun 03; 04 Jul 06. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 424/263.1; 424/190.1 424/200.1 435/320.1 435/325 435/366 435/69.1 435/69.3 435/69.7 536/23.7 536/24.1. A61K39/118 20060101 .

☐ 10. 7026300. 04 Nov 03; 11 Apr 06. One step immunization procedure for inducing a Chlamydia specific immune response. Brunham; Robert C., et al. 514/44; 424/184.1 424/234.1 435/252.3 435/471 530/350 536/23.1 536/23.4 536/23.7. A61K48/00 20060101 .

☐ 11. 7019125. 31 Dec 02; 28 Mar 06. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 536/23.7; 435/252.3 435/254.11 435/320.1 435/69.3 530/350 536/23.1 536/23.4. A01N43/04 20060101 A61K31/70 20060101 C08B11/193 20060101 C12N1/20 20060101 C12N15/00 20060101 .

☐ 12. 6811783. 07 Sep 99; 02 Nov 04. Immunogenic compositions for protection against chlamydial infection. Murdin; Andrew D., et al. 424/190.1; 424/185.1 530/350 536/23.7. A61K039/02 A61K039/00 C07K001/00 C07H021/04 .

☐ 13. 6686339. 15 Jun 01; 03 Feb 04. Nucleic acid molecules encoding inclusion membrane protein C of Chlamydia. Murdin; Andrew D., et al. 514/44; 424/93.2 435/320.1 536/23.1 536/23.2 536/24.1.

A61K048/00 A61K035/66 C12N015/63 C07H021/04 .

☐ 14. 6676949. 03 Dec 99; 13 Jan 04. Two-step immunization procedure against Chlamydia infection. Brunham; Robert C., et al. 424/263.1; 424/200.1 424/93.1 435/252.1 435/320.1 435/325 435/419 435/455 435/468 435/471 435/7.36 530/350 536/23.2 536/23.5 536/23.7 536/24.1 536/24.31 800/278 800/295 800/298. C12N015/31 .

Generate Collection Print

Term	Documents
CMV$	0
CMV	31122
CMVA	6
CMVAB	1
CMVACHE	3
CMVACHE-INJECTED	2
CMVACHE-TRANSFECTED	2
CMVACT	2
CMVADON	1
CMVAFT	2
CMVAGFT	1
(L4 AND (CMV$ OR CYTOMEGALO$ OR CYTO-MEGALO$).TI,AB,CLM.).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	14

There are more results than shown above. Click here to view the entire set.

Prev Page Next Page Go to Doc#

20050069942. 01 Nov 04. 31 Mar 05. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 435/6; 435/252.3 435/320.1 435/69.3 530/350 536/23.7 C12Q001/68 C07H021/04 C07K014/295 C12N015/74.

☐ 2. 20050065106. 10 Sep 04. 24 Mar 05. Immunogenic compositions for protection against Chlamydial infection. Murdin, Andrew D., et al. 514/44; A61K048/00.

☐ 3. 20050002944. 29 Dec 03. 06 Jan 05. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/184.1; A61K039/00 A61K039/38.

☐ 4. 20040254130. 10 Apr 03. 16 Dec 04. Chlamydia antigens and corresponding dna fragments and uses thereof. Murdin, Andrew D, et al. 514/44; A61K048/00.

☐ 5. 20040228874. 14 Jan 04. 18 Nov 04. Nucleic acid molecules encoding inclusion membrane protein C of Chlamydia. Murdin, Andrew D., et al. 424/190.1; 435/252.3 435/320.1 435/6 435/69.3 530/350 536/23.7 C12Q001/68 C07H021/04 A61K039/02.

☐ 6. 20040131630. 04 Nov 03. 08 Jul 04. Two-step immunization procedure against chlamydia infection. Brunham, Robert C., et al. 424/184.1; C12Q001/68 A61K039/00 A61K039/38.

☐ 7. 20040126382. 04 Nov 03. 01 Jul 04. Two-step immunization procedure against chlamydia infection. Brunham, Robert C., et al. 424/184.1; C12Q001/68 A61K039/00 A61K039/38.

☐ 8. 20040086525. 30 Jun 03. 06 May 04. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/190.1; 435/252.3 435/320.1 435/69.3 530/350 536/23.7 C07H021/04 A61K039/02 C12N001/21 C07K014/295.

☐ 9. 20040022801. 28 Jan 03. 05 Feb 04. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/190.1; 435/252.3 435/320.1 435/6 435/69.7 530/350 536/23.7 A61K039/02 C12Q001/68 C07H021/04 C12P021/04 C12N001/21 C07K014/295.

☐ 10. 20030225017. 30 Dec 02. 04 Dec 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 514/44; 424/185.1 435/252.3 435/320.1 435/6 435/69.3 530/350 536/23.2 A61K048/00 C12Q001/68 C07H021/04 A61K039/00 C12N001/21 C12P021/02 C07K014/195.

☐ 11. 20030224004. 06 Feb 03. 04 Dec 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/184.1; A61K039/00 A61K039/38.

☐ 12. 20030206921. 07 Jan 03. 06 Nov 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/190.1; 435/252.3 435/320.1 435/6 435/69.3 530/350 530/388.4 536/23.7 C12Q001/68 C07H021/04 A61K039/02 C12N001/21 C07K014/295 C07K016/12.

☐ 13. 20030170259. 27 Oct 99. 11 Sep 03. CHLAMYDIA ANTIGENS AND CORRESPONDING DNA FRAGMENTS AND USES THEREOF. MURDIN, ANDREW D., et al. 424/190.1; A61K039/02.

☐ 14. 20030161833. 31 Dec 02. 28 Aug 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/184.1; 536/23.1 C07H021/02 C07H021/04 A61K039/00 A61K039/38.

☐ 15. 20030157124. 20 Dec 02. 21 Aug 03. Chlamydia antigens and corresponding DNA fragments

and uses thereof. Murdin, Andrew D., et al. 424/190.1; 435/252.3 435/320.1 435/69.3 530/350 536/23.7 A61K039/02 C07H021/04 C07K014/295 C12P021/02 C12N001/21 C12N015/74.

☐ 16. 20030157123. 17 Dec 02. 21 Aug 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/190.1; 435/252.3 435/320.1 435/69.3 514/44 530/350 536/23.7 A61K048/00 C07H021/04 A61K039/02 C12P021/02 C12N001/21 C07K014/295.

☐ 17. 20030147924. 26 Jul 99. 07 Aug 03. CHLAMYDIA ANTIGENS AND CORRESPONDING DNA FRAGMENTS AND USESTHEREOF. MURDIN, ANDREW D., et al. 424/263.1; 435/252.3 435/320.1 435/69.3 530/350 536/23.7 A61K039/118 C07H021/04 C12P021/02 C12N001/21 C07K014/295 C12N015/74.

☐ 18. 20030100706. 03 Apr 01. 29 May 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 530/350; 424/190.1 536/23.7 A61K039/02 A61K048/00 C07H021/04 C07K014/195.

☐ 19. 20030095973. 03 May 00. 22 May 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/184.1; A61K039/40 A61K039/00 A61K039/38.

☐ 20. 20020168382. 03 Dec 99. 14 Nov 02. TWO-STEP IMMUNIZATION PROCEDURE AGAINST CHLAMYDIA INFECTION. Brunham, Robert C., et al. 424/200.1; A61K039/02.

☐ 21. 20020150591. 26 Jul 99. 17 Oct 02. CHLAMYDIA ANTIGENS AND CORRESPONDING DNA FRAGMENTS AND USES THEREOF. MURDIN, ANDREW D., et al. 424/190.1; A61K039/02.

☐ 22. 20020132994. 03 Apr 01. 19 Sep 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 536/23.1; C07H021/02 C07H021/04 A61K048/00.

☐ 23. 20020123067. 22 Dec 00. 05 Sep 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 435/7.1; 424/184.1 530/350 G01N033/53 A61K039/00 A61K039/38 C07K001/00 C07K014/00 C07K017/00.

☐ 24. 20020102270. 08 Feb 01. 01 Aug 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/190.1; 435/183 435/252.3 435/320.1 435/69.3 514/44 536/23.7 A61K048/00 C07H021/04 C12N009/00 A61K039/02 C12N001/21 C12P021/02.

☐ 25. 20020099188. 22 Dec 00. 25 Jul 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 536/23.1; C07H021/02 C07H021/04.

☐ 26. 20020094965. 03 Apr 01. 18 Jul 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 514/44; 536/23.2 536/23.5 A61K048/00 C07H021/04.

☐ 27. 20020094340. 01 Dec 99. 18 Jul 02. CHLAMYDIA ANTIGENS AND CORRESPONDING DNA THEREOF. MURDIN, ANDREW D., et al. 424/263.1; A61K039/118.

☐ 28. 20020091096. 13 Jul 01. 11 Jul 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 514/44; 435/252.3 435/320.1 435/6 435/69.1 435/91.2 536/23.7 A61K048/00 C12Q001/68 C07H021/04 C12P021/02 C12N001/21.

☐ 29. 20020082402. 03 Apr 01. 27 Jun 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 536/23.1; 424/184.1 530/350 C07H021/02 C07H021/04

A61K039/00 A61K039/38 C07K001/00 C07K014/00 C07K017/00.

☐ 30. 20020081682. 28 Jun 01. 27 Jun 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 435/183; 424/263.1 435/252.3 435/320.1 435/69.3 536/23.7 C12N009/00 C07H021/04 A61K039/118 C12N001/21 C12P021/02 C12N015/74.

☐ 31. 20020071831. 03 Apr 01. 13 Jun 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/93.21; 424/185.1 435/183 435/320.1 435/325 435/69.1 514/44 536/23.2 A61K048/00 C07H021/04 C12P021/02 C12N005/06 C12N009/00.

☐ 32. 20020037293. 22 Jun 01. 28 Mar 02. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin, Andrew D., et al. 424/190.1; 424/263.1 435/252.3 435/320.1 435/69.3 536/23.7 A61K039/118 C07H021/04 C12N001/21 C12P021/02 C12N015/74.

☐ 33. 7081245. 07 Jan 03; 25 Jul 06. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 424/263.1; 424/200.1 435/320.1 435/69.1 536/23.1 536/23.7. A61K39/118 20060101 C07H21/04 20060101 .

☐ 34. 7070792. 30 Jun 03; 04 Jul 06. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 424/263.1; 424/190.1 424/200.1 435/320.1 435/325 435/366 435/69.1 435/69.3 435/69.7 536/23.7 536/24.1. A61K39/118 20060101 .

☐ 35. 7026300. 04 Nov 03; 11 Apr 06. One step immunization procedure for inducing a Chlamydia specific immune response. Brunham; Robert C., et al. 514/44; 424/184.1 424/234.1 435/252.3 435/471 530/350 536/23.1 536/23.4 536/23.7. A61K48/00 20060101 .

☐ 36. 7019125. 31 Dec 02; 28 Mar 06. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 536/23.7; 435/252.3 435/254.11 435/320.1 435/69.3 530/350 536/23.1 536/23.4. A01N43/04 20060101 A61K31/70 20060101 C08B11/193 20060101 C12N1/20 20060101 C12N15/00 20060101 .

☐ 37. 6872814. 27 Oct 99; 29 Mar 05. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 536/23.7; 424/184.1 424/234.1 424/263.1 435/252.3 435/320.1 435/69.3 435/71.1 435/71.2 536/23.1 536/23.4. C07H021/04 C12N015/00 C12N059/09 A61K039/118 A61K039/02 .

☐ 38. 6811783. 07 Sep 99; 02 Nov 04. Immunogenic compositions for protection against chlamydial infection. Murdin; Andrew D., et al. 424/190.1; 424/185.1 530/350 536/23.7. A61K039/02 A61K039/00 C07K001/00 C07H021/04 .

☐ 39. 6808713. 16 Oct 01; 26 Oct 04. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 424/263.1; 424/178.1 424/184.1 424/190.1 424/200.1 435/252.3 435/254.11 435/320.1 435/69.1 435/69.3 435/70.1 530/350 536/23.1 536/23.7. A61K039/118 A61K039/02 C12N001/20 C12P021/04 C07H021/04 .

☐ 40. 6693087. 20 Aug 99; 17 Feb 04. Nucleic acid molecules encoding POMP91A protein of Chlamydia. Murdin; Andrew D., et al. 514/44; 424/130.1 536/23.4. A61K039/395 A61K031/70 C07H021/04 .

☐ 41. 6686339. 15 Jun 01; 03 Feb 04. Nucleic acid molecules encoding inclusion membrane protein C of Chlamydia. Murdin; Andrew D., et al. 514/44; 424/93.2 435/320.1 536/23.1 536/23.2 536/24.1.

A61K048/00 A61K035/66 C12N015/63 C07H021/04 .

☐ 42. 6676949. 03 Dec 99; 13 Jan 04. Two-step immunization procedure against Chlamydia infection. Brunham; Robert C., et al. 424/263.1; 424/200.1 424/93.1 435/252.1 435/320.1 435/325 435/419 435/455 435/468 435/471 435/7.36 530/350 536/23.2 536/23.5 536/23.7 536/24.1 536/24.31 800/278 800/295 800/298. C12N015/31 .

☐ 43. 6649370. 26 Oct 99; 18 Nov 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 435/69.1; 435/252.3 435/320.1 435/325 536/23.7. C12P021/06 C12N001/20 C12N015/00 C12N005/00 C07H021/04 .

☐ 44. 6642025. 13 Jul 01; 04 Nov 03. Chlamydia antigens and corresponding DNA fragments and uses thereof. Murdin; Andrew D., et al. 435/69.1; 435/320.1 435/69.3 435/69.7 435/69.8 435/71.1 435/71.2 536/23.1 536/23.7 536/24.1 536/24.2 536/24.32. C12P021/06 .

Generate Collection Print

Term	Documents
PLASMID	93123
PLASMIDS	71059
VECTOR	273384
VECTORS	172511
PROMOTER	117766
PROMOTERS	92963
(3 AND ((PLASMID OR PROMOTER OR VECTOR).CLM.)).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	44
(L3 AND (PLASMID OR VECTOR OR PROMOTER).CLM.).PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD.	44

Prev Page Next Page Go to Doc#

==========

Welcome to the SIB BLAST Network Service

If results of this search are reported or published, please mention t
the computation was performed at the SIB using the BLAST network ser
The SIB BLAST network service uses a server developed at SIB and the
BLAST 2 software.

In case of problems, please read the online BLAST help.
If your question is not covered, please contact <helpdesk@expasy.org>

NCBI BLAST program reference [PMID:9254694]:
Altschul S.F., Madden T.L., Schäffer A.A., Zhang J., Zhang Z., Mille
Lipman D.J. Gapped BLAST and PSI-BLAST: a new generation of protein
database search programs. Nucleic Acids Res. 25:3389-3402(1997).

==========

Query: 20 AA
Date run: 2006-11-21 18:56:53 UTC+0100 on blast01.vital-it.ch
Program: NCBI BLASTP 2.2.13 [Nov-27-2005]
Database: UniProtKB
3,626,539 sequences; 1,190,562,186 total letters
UniProt Knowledgebase Release 9.1 consists of:
UniProtKB/Swiss-Prot Release 51.1 of 14-Nov-2006: 241365 entries
UniProtKB/TrEMBL Release 34.1 of 14-Nov-2006: 3368791 entries

Taxonomic view | NiceBlast view | Printable view

List of potentially matching sequences

Send selected sequences to
Clustal W (multiple alignment) Submit Query
Select up to...

☐ Include query sequence

Db AC Description

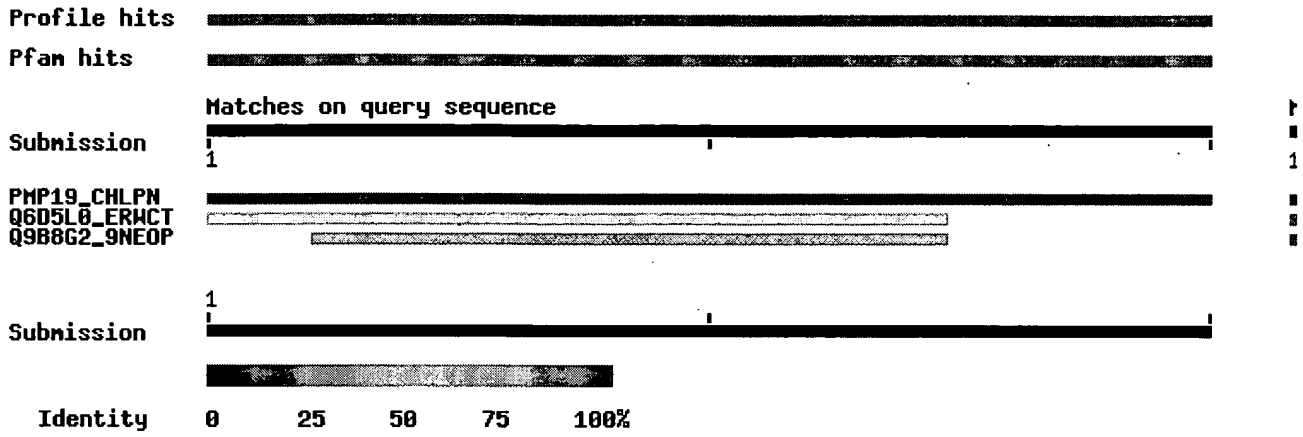
☐ sp Q9Z813 PMP19_CHLPN Probable outer membrane protein pmp19 prec.
☐ tr Q6D5L0 _ERWCT Nitrite extrusion protein [narK] [Erwinia caroto

☐ tr Q9B8G2 _9NEOP NADH dehydrogenase subunit 5 [nad5] [Heterodoxus

Graphical overview of the alignments

Click here to resubmit your query after masking regions matching PROSITE profiles or Pfam HMMs

(? Help) (use ScanProsite for more details about PROSITE matches)



Alignments

sp Q9Z813 PMP19_CHLPN **Probable outer membrane protein pmp19 precursor (Polymorphic membrane protein 19) [pmp19] [Chlamydia pneumoniae (Chlamydophila pneumoniae)]** 947 AA align

Score = 66.8 bits (150), Expect = 9e-11
Identities = 19/20 (95%), Positives = 19/20 (95%)

```
Query: 1  MKQMRLWGFLFLSSFCQVSY 20
          MKQMRLWGFLFLSSFCQVSY
Sbjct: 1  MKQMRLWGFLFLSSFCQVSY 20
```

tr Q6D5L0 Q6D5L0_ERWCT **Nitrite extrusion protein [narK] [Erwinia carotovora subsp. atroseptica (Pectobacterium atrosepticum)]** 462 AA alig

Score = 33.7 bits (72), Expect = 0.81
Identities = 10/17 (58%), Positives = 12/17 (70%), Gaps = 2/17 (11

```
Query: 1   MKQMRLW--GFLFLSSF 15
           +KQM LW   FL+LS F
```

```
Sbjct: 251 LKQMHLWVLSFLYLSTF 267
```

tr Q9B8G2 Q9B8G2_9NEOP	**NADH dehydrogenase subunit 5 [nad5] [Heterodoxus macropus (wallaby louse)]**		557 AA align

```
 Score = 32.5 bits (69), Expect = 2.0
 Identities = 10/13 (76%), Positives = 10/13 (76%)

Query: 3   QMRLWGFLFLSSF 15
           QM L GFLFLS F
Sbjct: 338 QMSLSGFLFLSGF 350


Database: UniProtKB
    Posted date:  Nov 13, 2006  2:29 PM
  Number of letters in database: 997,022,092
  Number of sequences in database:  2,977,730

  Database: /home/local/blastnet/database/EXPASY////UniProtKB.01
    Posted date:  Nov 13, 2006  2:31 PM
  Number of letters in database: 193,540,094
  Number of sequences in database:  648,809

Lambda     K      H
   0.341    0.278     2.07

Gapped
Lambda     K      H
   0.294    0.110    0.610


Matrix: PAM30
Gap Penalties: Existence: 9, Extension: 1
Number of Hits to DB: 12,644,532
Number of Sequences: 3626539
Number of extensions: 63252
Number of successful extensions: 3018
Number of sequences better than 10.0: 3
Number of HSP's better than 10.0 without gapping: 2
Number of HSP's successfully gapped in prelim test: 1
Number of HSP's that attempted gapping in prelim test: 3016
Number of HSP's gapped (non-prelim): 3
length of query: 20
length of database: 1,190,562,186
```

```
effective HSP length: 10
effective length of query: 10
effective length of database: 1,154,296,796
effective search space: 11542967960
effective search space used: 11542967960
T: 16
A: 15
X1: 15 ( 7.4 bits)
X2: 35 (14.8 bits)
X3: 58 (24.6 bits)
S1: 40 (21.5 bits)
S2: 64 (30.3 bits)
Wallclock time: 5 seconds
```

ExPASy Home page Site Map Search ExPASy Contact us Swiss-Prot Proteomics tools

UniProtKB/Swiss-Prot entry Q9Z813

[Entry info] [Name and origin] [References] [Comments] [Cross-references] [Keywords] [Features] [Sequence] [Tools]

Note: most headings are clickable, even if they don't appear as links. They link to the user manual or other documents.

Entry information

Entry name	**PMP19_CHLPN**
Primary accession number	**Q9Z813**
Secondary accession number	Q9JSE2
Integrated into Swiss-Prot on	June 1, 2001
Sequence was last modified on	May 1, 1999 (Sequence version 1)
Annotations were last modified on	October 31, 2006 (Entry version 55)

Name and origin of the protein

Protein name	**Probable outer membrane protein pmp19 [Precursor**
Synonym	**Polymorphic membrane protein 19**
Gene name	**Name: pmp19** OrderedLocusNames: CPn_0539, CP_0213, CpB0560
From	Chlamydia pneumoniae (Chlamydophila pneumoniae) [TaxID: 83558] [HAMAP proteome
Taxonomy	Bacteria; Chlamydiae; Chlamydiales; Chlamydiaceae; Chlamydophila.

References

[1] NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=CWL029;
DOI=10.1038/7716; PubMed=10192388 [NCBI, ExPASy, EBI, Israel, Japan]
Kalman S., Mitchell W.P., Marathe R., Lammel C.J., Fan J., Hyman R.W., Olinger L., Grim J., Davis R.W., Stephens R.S.;
"Comparative genomes of Chlamydia pneumoniae and C. trachomatis.";
Nat. Genet. 21:385-389(1999).

[2] NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=AR39;
DOI=10.1093/nar/28.6.1397; PubMed=10684935 [NCBI, ExPASy, EBI, Israel, Japan]
Read T.D., Brunham R.C., Shen C., Gill S.R., Heidelberg J.F., White O., Hickey E.K., Pet

J.D., Utterback T.R., Berry K.J., Bass S., Linher K.D., Weidman J.F., Khouri H.M., Craven Bowman C., Dodson R.J., Gwinn M.L., Nelson W.C., , Fraser C.M.;
"Genome sequences of Chlamydia trachomatis MoPn and Chlamydia pneumoniae AR39.
Nucleic Acids Res. 28:1397-1406(2000).

[3] NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=J138;
DOI=10.1093/nar/28.12.2311; PubMed=10871362 [NCBI, ExPASy, EBI, Israel, Japan]
Shirai M., Hirakawa H., Kimoto M., Tabuchi M., Kishi F., Ouchi K., Shiba T., Ishii K., Hatto Kuhara S., Nakazawa T.;
"Comparison of whole genome sequences of Chlamydia pneumoniae J138 from Japan ar CWL029 from USA.";
Nucleic Acids Res. 28:2311-2314(2000).

[4] NUCLEOTIDE SEQUENCE [GENOMIC DNA].
STRAIN=J138;
DOI=10.1086/315616; PubMed=10839753 [NCBI, ExPASy, EBI, Israel, Japan]
Shirai M., Hirakawa H., Ouchi K., Tabuchi M., Kishi F., Kimoto M., Takeuchi H., Nishida J. Shibata K., Fujinaga R., Yoneda H., Matsushima H., Tanaka C., Furukawa S., Miura K., Nakazawa A., Ishii K., Shiba T., Hattori M., Kuhara S., Nakazawa T.;
"Comparison of outer membrane protein genes omp and pmp in the whole genome seque of Chlamydia pneumoniae isolates from Japan and the United States.";
J. Infect. Dis. 181 Suppl 3:S524-S527(2000).

[5] NUCLEOTIDE SEQUENCE [LARGE SCALE GENOMIC DNA].
STRAIN=TW-183;
Geng M.M., Schuhmacher A., Muehldorfer I., Bensch K.W., Schaefer K.P., Schneider S., T., Essig A., Marre R., Melchers K.;
"The genome sequence of Chlamydia pneumoniae TW183 and comparison with other Chlamydia strains based on whole genome sequence analysis.";
Submitted (MAY-2002) to the EMBL/GenBank/DDBJ databases.

Comments

- ***SUBCELLULAR LOCATION***: Cell wall; extracellular side *(Potential)*.
- ***DEVELOPMENTAL STAGE***: Elementary body *(Potential)*.
- ***SIMILARITY***: Belongs to the PMP outer membrane protein family.
- ***SIMILARITY***: Contains 1 autotransporter (TC 1.B.12) domain [view classification].

Copyright

Cross-references

Sequence databases

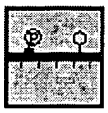
EMBL	AE001363; AAD18679.1; -; Genomic_DNA.	[EMBL / GenBank / DDBJ] [CoDingSequence]
	AE002161; AAF38083.1; -; Genomic_DNA.	[EMBL / GenBank / DDBJ] [CoDingSequence]
	BA000008; BAA98745.1; -; Genomic_DNA.	[EMBL / GenBank / DDBJ] [CoDingSequence]
	AE017159; AAP98489.1; -; Genomic_DNA.	[EMBL / GenBank / DDBJ] [CoDingSequence]
	D72067; D72067.	

PIR	G86557; G86557.
3D structure databases	
HSSP	Q90121; 1KPT. [HSSP ENTRY / PDB]
ModBase	Q9Z813.
Protein-protein interaction databases	
DIP	Q9Z813.
Enzyme and pathway databases	
BioCyc	CPNE115711:CP0213-MONOMER; -. CPNE115713:CPN0539-MONOMER; -. CPNE182082:CPB0560-MONOMER; -.
Organism-specific gene databases	
HOGENOM	[Family / Alignment / Tree]
Family and domain databases	
InterPro	IPR005546; Auto_transptbeta. IPR011427; ChlamPMP_M. IPR003368; Chlamydia_PMP. Graphical view of domain structure.
Pfam	PF03797; Autotransporter; 1. PF02415; Chlam_PMP; 10. PF07548; ChlamPMP_M; 1. Pfam graphical view of domain structure.
TIGRFAMs	TIGR01376; POMP_repeat; 5.
PROSITE	PS51208; AUTOTRANSPORTER; 1. PROSITE graphical view of domain structure (profiles).
ProDom	[Domain structure / List of seq. sharing at least 1 domain]
BLOCKS	Q9Z813.
Genome annotation databases	
GenomeReviews	AE002161_GR; CP_0213. AE009440_GR; CpB0560. AE001363_GR; CPn_0539. BA000008_GR; pmp19.
KEGG	cpa:CP0213; -. cpj:CPj0539; -. cpn:CPn0539; -. cpt:CpB0560; -.
TIGR	CP_0213; -.
Other	
ProtoNet	Q9Z813.
UniRef	View cluster of proteins with at least 50% / 90% / 100% identity.

Keywords

Complete proteome; **Membrane**; **Outer membrane**; **Signal**.

Features

 Feature table viewer

 Feature aligner

Key	From	To	Length	Description	FTId
SIGNAL	1	19	19	*Potential.*	
CHAIN	20	947	928	Probable outer membrane protein pmp19.	PRO_000002474
DOMAIN	672	947	276	Autotransporter.	
CONFLICT	453	453		E -> D (in Ref. 3).	

Sequence information

Length: **947 AA** [This is the length of the unprocessed precursor]

Molecular weight: **103643 Da** [This is the MW of the unprocessed precursor]

CRC64: **20CE1DEEE1606DFF** is a checksum on the sequenc

```
        10         20         30         40         50         60
MKQMRLWGFL FLSSFCQVSY LRANDVLLPL SGIHSGEDLE LFTLRSSSPT KTTYSLRKDF

        70         80         90        100        110        120
IVCDFAGNSI HKPGAAFLNL KGDLFFINST PLAALTFKNI HLGARGAGLF SESNVTFKGL

       130        140        150        160        170        180
HSLVLENNES WGGVLTTSGD LSFINNTSVL CQNNISYGPG GALLLQGRKS KALFFRDNRG

       190        200        210        220        230        240
TILFLKNKAV NQDESHPGYG GAVSSISPGS PITFADNQEI LFQENEGELG GAIYNDQGAI

       250        260        270        280        290        300
TFENNFQTTS FFSNKASFGG AVYSRYCNLY SQWGDTLFTK NAAAKVGGAI HADYVHIRDC

       310        320        330        340        350        360
KGSIVFEENS ATAGGAIAVN AVCDINAQGP VRFINNSALG LNGGAIYMQA TGSILRLHAN

       370        380        390        400        410        420
QGDIEFCGNK VRSQFHSHIN STSNFTNNAI TIQGAPREFS LSANEGHRIC FYDPIISATE

       430        440        450        460        470        480
NYNSLYINHQ RLLEAGGAVI FSGARLSPEH KKENKNKTSI INQPVRLCSG VLSIEGGAIL

       490        500        510        520        530        540
AVRSFYQEGG LLALGPGSKL TTQGKNSEKD KIVITNLGFN LENLDSSDPA EIRATEKASI

       550        560        570        580        590        600
EISGVPRVYG HTESFYENHE YASKPYTTSI ILSAKKLVTA PSRPEKDIQN LIIAESEYMG

       610        620        630        640        650        660
YGYQGSWEFS WSPNDTKEKK TIIASWTPTG EFSLDPKRRG SFIPTTLWST FSGLNIASNI

       670        680        690        700        710        720
VNNNYLNNSE VIPLQHLCVF GGPVYQIMEQ NPKQSSNNLL VQHAGHNVGA RIPFSFNTIL
```

```
       730        740        750        760        770        780
SAALTQLFSS SSQQNVADKS HAQILIGTVS LNKSWQALSL RSSFSYTEDS QVMKHVFPYK

       790        800        810        820        830        840
GTSRGSWRNY GWSGSVGMSY AYPKGIRYLK MTPFVDLQYT KLVQNPFVET GYDPRYFSSS

       850        860        870        880        890        900
EMTNLSLPIG IALEMRFIGS RSSLFLQVST SYIKDLRRVN PQSSASLVLN HYTWDIQGVP

       910        920        930        940
LGKEALNITL NSTIKYKIVT AYMGISSTQR EGSNLSANAH AGLSLSF
```

View entry in original UniProtKB/Swiss-Prot format
View entry in raw text format (no links)
Report form for errors/updates in this UniProtKB/Swiss-Prot entry

BLAST submission on ExPASy/SIB or at NCBI (USA)

Sequence analysis tools: ProtParam, ProtScale, Compute pI/Mw, PeptideMass, PeptideCutter, Dotlet (Java)

ScanProsite, MotifScan

Submit a homology modeling request to SWISS-MODEL

NPSA Sequence analysis tools

WEST Search History

Hide Items | Restore | Clear | Cancel

DATE: Tuesday, November 21, 2006

Hide?	Set Name	Query	Hit Count
	DB=USPT; PLUR=YES; OP=OR		
☐	L1	5,919,663.pn.	1
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR		
☐	L2	momp.clm.	34
☐	L3	momp$2.clm.	36
☐	L4	L3 and recombinant$.clm.	6

END OF SEARCH HISTORY

Infect Immun. 2001 Apr;69(4):2428-34.

Identification of polymorphic outer membrane proteins of Chlamydia psittaci 6BC.

Tanzer RJ, **Longbottom D**, **Hatch TP**.

Department of Molecular Sciences, University of Tennessee Center for Health Sciences, Memphis, Tennessee 38163, USA.

The genomes of Chlamydia spp. encode a family of putative outer membrane proteins, referred to as polymorphic outer membrane proteins (POMPs), which may play a role in the avoidance of host immune defenses. We analyzed avian strain 6BC of Chlamydia psittaci by polyacrylamide gel electrophoresis for the expression of POMPs. At least six putative POMPs were identified on the basis of their size (90 to 110 kDa) and labeling with an outer membrane-specific probe, 3-(trifluoromethyl)-3-(m-[125I]iodophenyl)diazirine. Three of the putative POMPs reacted with antiserum raised against a recombinant ovine C. psittaci strain POMP, and two possessed surface-exposed, trypsin-sensitive sites. The POMPs were dependent on disulfide bonds for their maintenance in sodium lauryl sarcosine- and sodium dodecyl sulfate-insoluble complexes but did not appear to be interpeptide disulfide bond cross-linked. The putative POMPs were found to be synthesized during the late phase of the chlamydial developmental cycle, cotemporally with the cysteine-rich doublet periplasmic proteins.

PMID: 11254603 [PubMed - indexed for MEDLINE]

Vaccine. 2004 Oct 22;22(31-32):4306-15.

Intranasal immunization with C. muridarum major outer membrane protein (MOMP) and cholera toxin elicits local production of neutralising IgA in the prostate.

Hickey DK, Jones RC, Bao S, Blake AE, Skelding KA, Berry LJ, Beagley KW.

Discipline of Immunology and Microbiology, School of Biomedical Sciences, Faculty of Health, The University of Newcastle, Callaghan, NSW 2308, Australia.

Successful control of sexually transmitted diseases (STDs) through vaccination will require the development of vaccine strategies that target protective immunity to both the female and male reproductive tracts (MRT). In the male, the immune privileged nature of the male reproductive tract provides a barrier to entry of serum immunoglobulins into the male reproductive ducts, thereby preventing the induction of protective immunity using conventional injectable vaccination techniques. In this study we investigated the potential of intranasal (IN) immunization to elicit anti-chlamydial immunity in BALB/c male mice. Intranasal immunization with Chlamydia muridarum major outer membrane protein (MOMP) admixed with cholera toxin (CT) resulted in high levels of MOMP-specific IgA in prostatic fluids (PF) and MOMP-specific IgA-secreting cells in the prostate. Prostatic fluid IgA inhibited in vitro infection of McCoy cells with C. muridarum. Using RT-PCR we also show that mRNA for the polymeric immunoglobulin receptor (PIgR), which transports IgA across mucosal epithelia, is expressed only in the prostate but not in other regions of the male reproductive ducts upstream of the prostate. These data suggest that using intranasal immunization to target IgA to the prostate may protect males against STDs while at the same time maintaining the state of immune privilege within the MRT.

PMID: 15474723 [PubMed - indexed for MEDLINE]

: Mol Microbiol. 2001 Feb;39(3):792-800.

Secretion of predicted Inc proteins of Chlamydia pneumoniae by a heterologous type III machinery.

Subtil A, **Parsot C**, **Dautry-Varsat A**.

Unite de Biologie des Interactions Cellulaires, URA CNRS 1960, Institut Pasteur, 25 rue du Docteur Roux, 75724 Paris Cedex 15, France. asubtil@pasteur.fr

Chlamydia spp. are strictly intracellular pathogens that grow inside a vacuole, called an inclusion. They possess genes encoding proteins homologous to components of type III secretion machineries, which, in other bacterial pathogens, are involved in delivery of bacterial proteins within or through the membrane of eukaryotic host cells. Inc proteins are chlamydial proteins that are associated with the inclusion membrane and are characterized by the presence of a large hydrophobic domain in their amino acid sequence. To investigate whether Inc proteins and other proteins exhibiting a similar hydropathic profile might be secreted by a type III system, we used a heterologous secretion system. Chimeras were constructed by fusing the N-terminal part of these proteins with a reporter, the Cya protein of Bordetella pertussis, and these were expressed in various strains of Shigella flexneri. We demonstrate that these hybrid proteins are secreted by the type III secretion system of S. flexneri, thereby providing evidence that IncA, IncB and IncC are secreted by a type III mechanism in chlamydiae. Moreover, we show that three other proteins from Chlamydia pneumoniae, all of which have in common the presence of a large hydrophobic domain, are also secreted by S. flexneri type III secretion machinery.

PMID: 11169118 [PubMed - indexed for MEDLINE]

Cell Microbiol. 2000 Feb;2(1):35-47.

A secondary structure motif predictive of protein localization to the chlamydial inclusion membrane.

Bannantine JP, **Griffiths RS**, **Viratyosin W**, **Brown WJ**, **Rockey DD**.

Department of Microbiology, Oregon State University, Corvallis 97331-3804, USA.

Chlamydiae are obligate intracellular pathogens that spend their entire growth phase sequestered in a membrane-bound vacuole called an inclusion. A set of chlamydial proteins, labelled Inc proteins, has been identified in the inclusion membrane (IM). The predicted IncA, IncB and IncC amino acid sequences share very limited similarity, but a common hydrophobicity motif is present within each Inc protein. In an effort to identify a relatively complete catalogue of Chlamydia trachomatis proteins present in the IM of infected cells, we have screened the genome for open reading frames encoding this structural motif. Hydropathy plot analysis was used to screen each translated open reading frame in the C. trachomatis genome database. Forty-six candidate IM proteins (C-Incs) that satisfied the criteria of containing a bilobed hydrophobic domain of at least 50 amino acids were identified. The genome of Chlamydia pneumoniae encodes a larger collection of C-Inc proteins, and only approximately half of the C-Incs are encoded within both genomes. In order to confirm the hydropathy plot screening method as a valid predictor of C-Incs, antisera and/or monoclonal antibodies were prepared against six of the C. trachomatis C-Incs. Immunofluorescence microscopy of C. trachomatis-infected cells probed with these antibodies showed that five out of six C-Incs are present in the chlamydial IM. Antisera were also produced against C. pneumoniae p186, a protein sharing identity with Chlamydia psittaci IncA and carrying a similar bilobed hydrophobic domain. These antisera labelled the inclusion membrane in C. pneumoniae infected cells, confirming that proteins sharing the unique secondary structural characteristic also localize to the inclusion membrane of C. pneumoniae. Sera from patients with high-titre antibodies to C. trachomatis were examined for reactivity with each tested C-Inc protein. Three out of six tested C-Incs were recognized by a majority of these patient sera. Collectively, these studies identify and characterize novel proteins localized to the chlamydial IM and demonstrate the existence of a potential secondary structural targeting motif for localization of chlamydial proteins to this unique intracellular environment.

PMID: 11207561 [PubMed - indexed for MEDLINE]